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SUITE 300
GARDEN CITY, NY 11530

EXAMINER

PEREZ, JAMES M

ART UNIT	PAPER NUMBER
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2609

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,756

Applicant(s)

RICHARDSON, MICHAEL
RICHARD

Examiner

James Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 18-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhang USPN 6369758.

With regards to claim 1, Zhang teaches a method of determining the amount of signal power and interference power in a received signal, the received signal having a wanted signal and a plurality of interfering signals, the method comprising the steps of:

a) selecting a plurality (**col. 10, lines 34-37**) of first known structures (**fig. 1: element TRS II: col. 4, lines 30-41**) in the wanted signal (**signal sent by a transmitter which is intended for the disclosed receiving unit**); b) processing the received signal in accordance with said plurality of first known structures to derive a set of amplitude values (**col. 10, lines 29-37: correlation produces amplitude values, and a high value (above a threshold) has a high amplitude**) corresponding to the said first known structures (**correlation of the pseudo random training symbols**); and c) using the set of amplitude values to determine the power level for at least a portion of the received signal (**Zhang: disclosed claim 4: The method wherein the weighting**

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factor for each branch is determined from an average power and power variance determined from the pseudo random training symbol. Note that the TRS had a high correlation amplitude (value) that's why it was recognized as the TRS, and also TRS is within the received signal).

With regards to claim 18, Zhang further teaches a method according to claim 1, wherein step b) comprises correlating (col. 10, lines 29-37: correlation produces amplitude values, and a high value (above a threshold) has a high amplitude) the received signal with said selected plurality of first known structures (correlation of the pseudo random training symbols) to derive said amplitude values.

With regards to claim 19, Zhang further teaches a method according to claim 8, wherein step c) comprises determining mean (col. 17, lines 9-25: mean signal power) and variance (Zhang: disclosed claim 4) values for said amplitude values (the disclosed power and variance are inherently calculated based on the received training symbols, and the training symbols inherently have a non-zero amplitude otherwise the training symbol would not be detected).

With regards to claim 20, Zhang further teaches a method according to claim 9, wherein step c) further comprises using calibration factors to produce an absolute power value for the wanted signal (Zhang: col. 7, lines 18-70: equation 11: signal power).

With regards to claim 21, Zhang further teaches a method according to claim 10, wherein step c) further comprises using said calibration factors to produce an absolute power value for the interfering signals (**col. 5, lines 25-70: equation 4**).

With regards to claim 22, the limitations of this claim are disclosed in claim 19.

With regards to claim 23, the limitations of this claim are disclosed in claim 20.

With regards to claim 24, the limitations of this claim are disclosed in claim 21.

With regards to claim 25, the limitations of this claim are disclosed in claim 20.

With regards to claim 26, the limitations of this claim are disclosed in claim 21.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang USPN 6369758 in view of ETSI EN 300 744 V1.4.1 (2001-01).

With regards to claim 2, Zhang teaches a method according to claim 1. Zhang remains silent to teaching a step wherein step a) includes identifying said plurality of first known structures using a further known structure within the wanted signal.

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ETSI EN 300 744 V1.4.1 (2001-01) teaches a method wherein step a) includes identifying said plurality of first known structures (**page 30: Table 9: synchronization bits**) using a further known structure (**page 30: Table 9: the entire preamble structure**) within the wanted signal (**the preamble is inherently in the wanted signal**).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zhang with the teachings of ETSI EN 300 744 V1.4.1 (2001-01) in order to build a device which is compatible with a major global standard which would increase profits, marketability, and the product's consumer basis.

With regards to claim 3, ETSI EN 300 744 V1.4.1 (2001-01) further teaches a method wherein step a) includes identifying locations of a further structure (**identifying the location of the beginning of the preamble using the initialization bit**) within the wanted signal and using the identified locations to derive the locations of said plurality of first known structures (**page 30: Table 9: the synchronization bits (S17-S22) have a fixed location relationship with the initialization bit (S0)**).

With regards to claim 4, ETSI EN 300 744 V1.4.1 (2001-01) further teaches a method according to claim 2, where in said plurality of first known structures comprises Frequency Correction Bursts (**page 30: Table 9: the synchronization bits (S17-S22) are used to synchronize the wanted received signal with the receiver, therefore it**

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is a burst of data which corrects (realigns) the frequency of the received signal in the receiver).

With regards to claim 5, ETSI EN 300 744 V1.4.1 (2001-01) further teaches a method according to claim 3, wherein said further known structure comprises sync bursts **(the synchronization bits are within the preamble therefore it is a sync burst, note that burst is taken to mean a short data length).**

With regards to claim 6, Zhang further teaches a method according to claim 2, wherein the step of identifying said plurality of first known structures includes using pointers selected by said further known structure **(col. 4, lines 19-28: a timing pointer is used to point to the beginning of each symbol).**

With regards to claim 12, Zhang further teaches a method according to claim 3, wherein the step of identifying said plurality of first known structures includes using pointers selected by said further known structure **(col. 4, lines 19-28: a timing pointer is used to point to the beginning of each symbol).**

5. Claims 7-11 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang USPN 6369758 in view of ETSI EN 300 744 V1.4.1 (2001-01) in further view of Defreese USPN 6493876.

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With regards to claim 7, Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) teach a method according to claim 6. Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) remain silent with respect to disclosing a method wherein said pointers are stored in a look-up table, and step a) includes using said pointers to select said plurality of first known structures in said received signal.

Defreese teaches a method wherein said pointers are stored in a look-up table (Defreese: disclosed claims 16 and 17), and step a) includes using said pointers to select said plurality of first known structures in said received signal (**Defreese: disclosed claims 16 and 17: mapping television channel to a television service identifier**).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) with the teachings disclosed in Defreese in order to increase profits by providing an improved full service television system capable of sustaining two-way communications between a cable service provider and a cable service subscriber, deliver services such as World Wide Web browsing, E-mail, and deliver advanced television services such as a comprehensive channel navigator.

With regards to claim 8, Zhang further teaches a method according to claim 7, wherein step b) comprises correlating (**col. 10, lines 29-37: correlation produces amplitude values, and a high value (above a threshold) has a high amplitude**) the

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received signal with said selected plurality of first known structures (**correlation of the pseudo random training symbols**) to derive said amplitude values.

With regards to claim 9, Zhang further teaches a method according to claim 8, wherein step c) comprises determining mean (**col. 17, lines 9-25: mean signal power**) and variance (**Zhang: disclosed claim 4**) values for said amplitude values (**the disclosed power and variance are inherently calculated based on the received training symbols, and the training symbols inherently have a non-zero amplitude otherwise the training symbol would not be detected**).

With regards to claim 10, Zhang further teaches a method according to claim 9, wherein step c) further comprises using calibration factors to produce an absolute power value for the wanted signal (**Zhang: col. 7, lines 18-70: equation 11: signal power**).

With regards to claim 11, Zhang further teaches a method according to claim 10, wherein step c) further comprises using said calibration factors to produce an absolute power value for the interfering signals (**col. 5, lines 25-70: equation 4**).

With regards to claim 13, Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) teach a method according to claim 12. Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) remain silent with respect to disclosing a method wherein said pointers are

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stored in a look-up table, and step a) includes using said pointers to select said plurality of first known structures in said received signal.

Defreese teaches a method wherein said pointers are stored in a look-up table (Defreese: disclosed claims 16 and 17), and step a) includes using said pointers to select said plurality of first known structures in said received signal (**Defreese: disclosed claims 16 and 17: mapping television channel to a television service identifier**).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Zhang in view of ETSI EN 300 744 V1.4.1 (2001-01) with the teachings disclosed in Defreese in order to increase profits by providing an improved full service television system capable of sustaining two-way communications between a cable service provider and a cable service subscriber, deliver services such as World Wide Web browsing, E-mail, and deliver advanced television services such as a comprehensive channel navigator.

With regards to claim 14, the limitations of this claim are disclosed in claim 8.

With regards to claim 15, the limitations of this claim are disclosed in claim 9.

With regards to claim 16, the limitations of this claim are disclosed in claim 10.

With regards to claim 17, the limitations of this claim are disclosed in claim 11.

Conclusion


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Perez whose telephone number is (571) 270-3231. The examiner can normally be reached on Monday - Friday, 8:30am to 6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on (571) 272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
8/16/2007


TUAN HO
PRIMARY EXAMINER